



900 Magazine Rd.  
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May 26, 2011

Andrew Hammond  
Piedmont Regional Office  
4949-A Cox Road  
Glen Allen, VA 23060

**Piedmont Regional Office**  
**MAY 27 2011**  
**RECEIVED**

**Re: VPDES Permit Renewal Application – VA0025437**

Dear Mr. Hammond:

We are in receipt of your comment letter dated May 20, 2011. Our responses are as follows:

EPA Form 2A:

- A.9.b – Outfall 001 is actually located at 37° 14' 23.7" N, 77° 23' 32.4" W. This is per itouchmap.com using a Google Map satellite image to locate the outfall. This correction has been made on the form.
- A.9.e – The flow of 12.15 mgd used here was the 2010 calendar year average flow. This has been revised to 10.98 mgd to correspond with the flow provided in the last column of A.6.b and in the water balance, which is for the period from March 2010 to February 2011.
- A.12 – The flow rate of 11.73 mgd used here was the average flow for the period of February 2010 to January 2011. This has been revised to 10.98 mgd to correspond with the flow provided in the last column of A.6.b and in the water balance, which is for the period from March 2010 to February 2011. Accordingly, the data provided in this table and the table for B.6 have been adjusted to correspond to this period.
- B.6 – The TRC numbers have been revised to read "<QL".
- D – Outfall numbers have been added.
- D, Mercury – Corrections have been made.
- D, Cyanide – Corrections have been made.
- D, Bromoform – Corrections have been made.
- D, Chloroform – Corrections have been made.
- E.4 – A summary table has been included with the application.
- F.2.a – Only 10 non-categorical SIU's were listed as Virginia State University has been transferred from our program to Chesterfield County's. Accordingly, the data sheet for VSU (previously page 11 of 15) has been removed from the attachment sheets for F.3 to F.8.
- F.3, Container First Services – The physical address was provided. However, as CFS is now providing offices at the physical address, mail may also be sent there. In order to be consistent with the database, the Chester mailing address has been provided on page 7 of 14.
- F.3, Oakley – The name has been changed on page 8 of 14.
- F.3, VSU – See above note.
- F.3, Southside Regional Medical Center – The facility's permit number is SCP-028. The Pretreatment Report has an error on page A-2 showing the permit number for the old hospital building.

Attachment A

- Selenium – The form has been corrected to show total recoverable. The reported data is correct.
- Kepone – The correction has been made.
- Free Cyanide – The correction has been made.

Sludge Permit Application Form

- A.1.a – The notation of "WWTP" has been removed.
- A.7 – The address has been corrected to P.O. Box 562.
- C.1.a – The notation has been added.
- Pages 7 to 18 – The facility name and permit number have been added.

Please let me know if you need anything further. I can be reached at (804) 861-0111 x202 or via e-mail at [aharrison@scwwa.org](mailto:aharrison@scwwa.org).

Sincerely,



L. Alan Harrison, P.E.  
Assistant Executive Director

Enclosure

Cc: Ray Burpoe, Operations Manager, SCWWA  
Christina Stokes, Laboratory/Pretreatment Manager, SCWWA

Form Approved 1/14/99  
OMB Number 2040-0086

**WASTEWATER DISCHARGES:**

If you answered "yes" to question A.8.a, complete questions A.9 through A.12 **once for each outfall** (including bypass points) through which effluent is discharged. Do not include information on combined sewer overflows in this section. **If you answered "no" to question A.8.a, go to Part B, "Additional Application Information for Applicants with a Design Flow Greater than or Equal to 0.1 mgd."**

a. Outfall number 001

b. Location PETERSBURG 23803  
(City or town, if applicable) (Zip Code)  
VA  
(County) (State)  
37 deg 14' 23.7" N 77 deg 23' 32.4" W  
(Latitude) (Longitude)

c. Distance from shore (if applicable) NA ft.

d. Depth below surface (if applicable) NA ft.

e. Average daily flow rate 10.98 mgd 3/10 - 2/11

f. Does this outfall have either an intermittent or a periodic discharge?  
\_\_\_\_\_ Yes \_\_\_\_\_ ✓ No (go to A.9.g.)

If yes, provide the following information:

Number of times per year discharge occurs: \_\_\_\_\_

Average duration of each discharge: \_\_\_\_\_

Average flow per discharge: \_\_\_\_\_ mgd

Months in which discharge occurs: \_\_\_\_\_

g. Is outfall equipped with a diffuser? Yes \_\_\_\_\_ ✓ No \_\_\_\_\_

a. Name of receiving water APPOMATTOX RIVER

b. Name of watershed (if known) JAMES RIVER

United States Soil Conservation Service 14-digit watershed code (if known): \_\_\_\_\_

c. Name of State Management/River Basin (if known): JAMES RIVER (LOWER)

United States Geological Survey 8-digit hydrologic cataloging unit code (if known): \_\_\_\_\_

d. Critical low flow of receiving stream (if applicable):  
acute N/A cfs chronic N/A cfs

e. Total hardness of receiving stream at critical low flow (if applicable): N/A mg/l of CaCO<sub>3</sub>

## FACILITY NAME AND PERMIT NUMBER:

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OMB Number 2040-0086

SOUTH CENTRAL WASTEWATER AUTHORITY - VA0025437

## A.11. Description of Treatment.

- a. What levels of treatment are provided? Check all that apply.

☒ Primary ☒ Secondary  
☐ Advanced ☐ Other. Describe: \_\_\_\_\_

- b. Indicate the following removal rates (as applicable):

Design BOD<sub>5</sub> removal or Design CBOD<sub>5</sub> removal 98 %  
 Design SS removal 93 %  
 Design P removal 79 %  
 Design N removal N/A %  
 Other NH<sub>3</sub>-N 94 %

Hydraulic drop  
after parshall  
flume

- c. What type of disinfection is used for the effluent from this outfall? If disinfection varies by season, please describe.

SODIUM HYPOCHLORITE

If disinfection is by chlorination, is dechlorination used for this outfall?

☒ Yes ☐ No

- d. Does the treatment plant have post aeration?

☒ Yes ☐ No

**A.12. Effluent Testing Information.** All Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three samples and must be no more than four and one-half years apart.

Outfall number: 001

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)	6.10	s.u.			
pH (Maximum)	8.30	s.u.			
Flow Rate	40.58	MGD	10.98	MGD	365
Temperature (Winter)	23.90	C	16.31	C	212(Mar-May,Nov-Feb)
Temperature (Summer)	29.10	C	25.9	C	153 (Jun-Oct)

\* For pH please report a minimum and a maximum daily value

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		

## CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.

BIOCHEMICAL OXYGEN DEMAND (Report one)	BOD-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	CBOD-5	<5	mg/l	<5	mg/l	156	SM18-5210B	5 mg/l
FECAL COLIFORM		613.1	cfu/100 ml	<1.4	cfu/100 ml	216	Colilert-18	1 cfu/100 ml
TOTAL SUSPENDED SOLIDS (TSS)		2.4	mg/l	1.1	mg/l	13	SM18-2540D	1.0 mg/l

## END OF PART A.

**REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE**

## FACILITY NAME AND PERMIT NUMBER:

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OMB Number 2040-0086

SOUTH CENTRAL WASTEWATER AUTHORITY - VA0025437

- c If the answer to B.5.b is "Yes," briefly describe, including new maximum daily inflow rate (if applicable).

- d. Provide dates imposed by any compliance schedule or any actual dates of completion for the implementation steps listed below, as applicable. For improvements planned independently of local, State, or Federal agencies, indicate planned or actual completion dates, as applicable. Indicate dates as accurately as possible.

Implementation Stage	Schedule MM / DD / YYYY	Actual Completion MM / DD / YYYY
- Begin construction	___/___/___	___/___/___
- End construction	___/___/___	___/___/___
- Begin discharge	___/___/___	___/___/___
- Attain operational level	___/___/___	___/___/___

Nutrient reduction upgrade designed. Project on hold pending SCWWA Board decision on when to perform additional design and to bid.

- e. Have appropriate permits/clearances concerning other Federal/State requirements been obtained? ☐ Yes ☐ No

Describe briefly: \_\_\_\_\_

**B.6. EFFLUENT TESTING DATA (GREATER THAN 0.1 MGD ONLY).**

Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall Number: 001

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.							
AMMONIA (as N)	0.92	mg/l	0.117	mg/l	157	SM18-4500NH3F	0.20 mg/l
CHLORINE (TOTAL RESIDUAL, TRC)	<QL	mg/l	<QL	mg/l	365	HACH 8167	0.10 mg/l
DISSOLVED OXYGEN	11.6	mg/l	8.54	mg/l	365	SM18-4500 O-G	
TOTAL KJELDAHL NITROGEN (TKN)	2.6	mg/l	<1.0	mg/l	157	EPA 351.2	0.50 mg/l
NITRATE PLUS NITRITE NITROGEN	17.7	mg/l	11.19	mg/l	157	SM18-4500NO3F	0.50 mg/l
OIL and GREASE	<5.0	mg/l	<5.0	mg/l	3	EPA 1664	5.0 mg/l
PHOSPHORUS (Total)	8.40	mg/l	1.29	mg/l	169	HACH 8190,8048	0.10 mg/l
TOTAL DISSOLVED SOLIDS (TDS)	343	mg/l	307.7	mg/l	3	SM18/2540C	10 mg/l
OTHER							

**END OF PART B.**

**REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE**

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## SUPPLEMENTAL APPLICATION INFORMATION

## PART D. EXPANDED EFFLUENT TESTING DATA

Refer to the directions on the cover page to determine whether this section applies to the treatment works.

**Effluent Testing: 1.0 mgd and Pretreatment Treatment Works.** If the treatment works has a design flow greater than or equal to 1.0 mgd or it has (or is required to have) a pretreatment program, or is otherwise required by the permitting authority to provide the data, then provide effluent testing data for the following pollutants. Provide the indicated effluent testing information and any other information required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analyses conducted using 40 CFR Part 136 methods. In addition, these data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. Indicate in the blank rows provided below any data you may have on pollutants not specifically listed in this form. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall number: 001 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
<b>METALS (TOTAL RECOVERABLE), CYANIDE, PHENOLS, AND HARDNESS.</b>											
ANTIMONY	<100	ug/l	<10.9	lb/day	<86.7	ug/l	<8.17	lb/da	3	EPA 200.7	60 ug/l (1)
ARSENIC	<60	ug/l	<6.52	lb/day	<60	ug/l	<5.73	lb/da	3	EPA 200.7	60 ug/l
BERYLLIUM	<2.0	ug/l	<0.22	lb/day	<2.0	ug/l	<0.19	lb/da	3	EPA 200.7	2.0 ug/l
CADMIUM	<0.50	ug/l	<0.05	lb/day	<0.50	ug/l	<0.05	lb/da	3	EPA 200.8	0.5 ug/l
CHROMIUM	<10	ug/l	<1.09	lb/day	<10	ug/l	<0.96	lb/da	3	EPA 200.7	10 ug/l
COPPER	7	ug/l	0.76	lb/day	5.67	ug/l	0.57	lb/da	3	EPA 200.7	2 ug/l
LEAD	<2.0	ug/l	<0.22	lb/day	<2.0	ug/l	<0.19	lb/da	3	EPA 200.8	2.0 ug/l
MERCURY	4.7	ng/l	0.49	*	<3.57	ng/l	<0.35	*	3	EPA 245.7	2.0 ng/l (2)
NICKEL	<10	ug/l	<1.09	lb/day	<10	ug/l	<0.96	lb/da	3	EPA 200.7	10 ug/l
SELENIUM	<2.0	ug/l	<0.22	lb/day	<2.0	ug/l	<0.19	lb/da	3	EPA 200.8	2.0 ug/l
SILVER	<0.50	ug/l	<0.05	lb/day	<0.50	ug/l	<0.05	lb/da	3	EPA 200.8	0.50 ug/l
THALLIUM	<40	ug/l	<4.35	lb/day	<40	ug/l	<3.82	lb/da	3	EPA 200.7	40 ug/l
ZINC	41	ug/l	4.46	lb/day	39	ug/l	3.76	lb/da	3	EPA 200.7	20.0 ug/l
CYANIDE	15	ug/l	1.11	lb/day	<12	ug/l	<1.08	lb/da	4	EPA 335.4	10 ug/l
TOTAL PHENOLIC COMPOUNDS	<10	ug/l	<1.09	lb/day	<10	ug/l	<0.96	lb/da	3	EPA 625	10.0 ug/l
HARDNESS (AS CaCO <sub>3</sub> )	56.90	mg/l	5899	lb/day	54.33	mg/l	5197	lb/da	3	SM 2340 B	0.1 mg/l (3)
Use this space (or a separate sheet) to provide information on other metals requested by the permit writer.											
* mercury units 1/1000 lbs/day											

**FACILITY NAME AND PERMIT NUMBER:**  
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Outfall number: 001 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
VOLATILE ORGANIC COMPOUNDS.											
ACROLEIN	<50.0	ug/l	<5.43	lb/day	<26.7	ug/l	<2.65	lb/da	3	EPA 624	10 ug/l (4)
ACRYLONITRILE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l
BENZENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l
BROMOFORM	83.9	ug/l	6.23	lb/day	<41.7	ug/l	<3.55	lb/da	3	EPA 624	10 ug/l
CARBON TETRACHLORIDE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l
CLOROBENZENE	<10.0	ug/l	<1.04	lb/day	<10.0	ug/l	<0.59	lb/da	2	EPA 624	10 ug/l
CHLORODIBROMO-METHANE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l
CHLOROETHANE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l
2-CHLORO-ETHYLVINYL ETHER	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
CHLOROFORM	16.8	ug/l	1.74	lb/day	<12.3	ug/l	<1.19	lb/da	3	EPA 624	10 ug/l
DICHLOROBROMO-METHANE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l
1,1-DICHLOROETHANE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l
1,2-DICHLOROETHANE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l
TRANS-1,2-DICHLORO-ETHYLENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l
1,1-DICHLOROETHYLENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l
1,2-DICHLOROPROPANE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l
1,3-DICHLORO-PROPYLENE	<20.0	ug/l	<2.17	lb/day	<20.0	ug/l	<1.91	lb/da	3	EPA 624	20 ug/l
ETHYLBENZENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l
METHYL BROMIDE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l
METHYL CHLORIDE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l
METHYLENE CHLORIDE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l
1,1,2,2-TETRACHLORO-ETHANE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l
TETRACHLORO-ETHYLENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l
TOLUENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l

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Outfall number: 001 (Complete once for each outfall discharging effluent to waters of the United States.)											
POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
1,1,1-TRICHLOROETHANE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l
1,1,2-TRICHLOROETHANE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l
TRICHLORETHYLENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l
VINYL CHLORIDE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l
Use this space (or a separate sheet) to provide information on other volatile organic compounds requested by the permit writer.											
<b>ACID-EXTRACTABLE COMPOUNDS</b>											
P-CHLORO-M-CRESOL	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
2-CHLOROPHENOL	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
2,4-DICHLOROPHENOL	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
2,4-DIMETHYLPHENOL	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
4,6-DINITRO-O-CRESOL	<20.0	ug/l	<2.07	lb/day	<13.3	ug/l	<1.30	lb/da	3	EPA 625	10 ug/l (5)
2,4-DINITROPHENOL	<20.0	ug/l	<2.07	lb/day	<13.3	ug/l	<1.30	lb/da	3	EPA 625	10 ug/l (6)
2-NITROPHENOL	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
4-NITROPHENOL	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
PENTACHLOROPHENOL	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
PHENOL	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
2,4,6-TRICHLOROPHENOL	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
Use this space (or a separate sheet) to provide information on other acid-extractable compounds requested by the permit writer.											
<b>BASE-NEUTRAL COMPOUNDS.</b>											
ACENAPHTHENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
ACENAPHTHYLENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
ANTHRACENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
BENZIDINE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
BENZO(A)ANTHRACENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
BENZO(A)PYRENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l



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POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
3,4 BENZO-FLUORANTHENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<1.06	lb/da	2	EPA 625	10 ug/l
BENZO(GH)PERYLENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
BENZO(K)FLUORANTHENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
BIS (2-CHLOROETHOXY) METHANE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
BIS (2-CHLOROETHYL)-ETHER	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
BIS (2-CHLOROISO-PROPYL) ETHER	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
BIS (2-ETHYLHEXYL) PHTHALATE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.92	lb/da	2	EPA 625	10 ug/l
4-BROMOPHENYL PHENYL ETHER	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
BUTYL BENZYL PHTHALATE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
2-CHLORONAPHTHALENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
4-CHLORPHENYL PHENYL ETHER	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
CHRYSENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
DI-N-BUTYL PHTHALATE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
DI-N-OCTYL PHTHALATE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
DIBENZO(A,H) ANTHRACENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
1,2-DICHLOROBENZENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l
1,3-DICHLOROBENZENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l
1,4-DICHLOROBENZENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 624	10 ug/l
3,3-DICHLOROBENZIDINE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
DIETHYL PHTHALATE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
DIMETHYL PHTHALATE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
2,4-DINITROTOLUENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
2,6-DINITROTOLUENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
1,2-DIPHENYLHYDRAZINE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l

**FACILITY NAME AND PERMIT NUMBER:**  
SOUTH CENTRAL WASTEWATER AUTHORITY - VA0025437

Form Approved 1/14/99  
OMB Number 2040-0086

Outfall number: 001 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
FLUORANTHENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
FLUORENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
HEXACHLOROBENZENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
HEXACHLOROBUTADIENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
HEXACHLOROCYCLO-PENTADIENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
HEXACHLOROETHANE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
INDENO(1,2,3-CD)PYRENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
ISOPHORONE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
NAPHTHALENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
NITROBENZENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
N-NITROSODI-N-PROPYLAMINE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
N-NITROSODI- METHYLAMINE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
N-NITROSODI-PHENYLAMINE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
PHENANTHRENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
PYRENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
1,2,4-TRICHLOROBENZENE	<10.0	ug/l	<1.09	lb/day	<10.0	ug/l	<0.96	lb/da	3	EPA 625	10 ug/l
Use this space (or a separate sheet) to provide information on other base-neutral compounds requested by the permit writer.											
Use this space (or a separate sheet) to provide information on other pollutants (e.g., pesticides) requested by the permit writer.											
<p align="center"><b>END OF PART D.</b></p> <p align="center"><b>REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE</b></p>											

#### E.4. – TOXICITY TESTING INFORMATION

<u>TEST NO.</u>	<u>OUTFALL</u>	<u>COLLECTION DATES</u>	<u>TESTING DATES</u>	<u>TEST METHOD(S)</u>	<u>RESULTS</u>
1)	001	9/21/08 – 9/25/08, 10/26/08 – 10/30/08	Ceriodaphnia: 9/23/08 – 9/29/08  Fathead Minnow: 10/28/08 – 11/04/08	EPA-821-R-02-013	3-Brood Ceriodaphnia Chronic: 1.0 TU-C, NOEC = 100%  7-Day Fathead Minnow Chronic: 2.6 TU-C, NOEC = 39%
2)	001	4/19/09 – 4/23/09	Ceriodaphnia: 4/21/09 – 4/27/09  Fathead Minnow: 4/21/09 – 4/28/09	EPA-821-R-02-013	3-Brood Ceriodaphnia Chronic: 1.0 TU-C, NOEC = 100%  7-Day Fathead Minnow Chronic: 1.0 TU-C, NOEC = 100%
3)	001	3/15/10 – 3/18/10	Ceriodaphnia: 3/15/10 – 3/21/10  Fathead Minnow: 3/15/10 – 3/22/10	Ceriodaphnia: EPA 1002.0  Fathead Minnow: EPA 1000.0	3-Brood Ceriodaphnia Chronic: 1.0 TU-C, NOEC = 100%  7-Day Fathead Minnow Chronic: 1.9 TU-C, NOEC = 52%

**ATTACHMENT A  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY CRITERIA MONITORING**

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL <sup>(1)</sup>	REPORTING RESULTS	SAMPLE TYPE <sup>(2)</sup>	SAMPLE FREQUENCY
<b>METALS</b>						
7440-36-0	Antimony, dissolved	200.7	4300	<QL	C	1/5 YR
7440-38-2	Arsenic, dissolved	200.7	230	<QL	C	1/5 YR
7440-43-9	Cadmium, dissolved	200.7	1	<QL	C	1/5 YR
16065-83-1	Chromium III, dissolved <sup>(8)</sup>	200.7	64	<QL	C	1/5 YR
18540-29-9	Chromium VI, dissolved <sup>(8)</sup>	200.7	12	<QL	C	1/5 YR
7440-50-8	Copper, dissolved	200.7	5.9	6	C	1/5 YR
7439-92-1	Lead, dissolved	200.8	8.4	<QL	C	1/5 YR
7439-97-6	Mercury, dissolved	245.7	1.0	<QL	C	1/5 YR
7440-02-0	Nickel, dissolved	200.7	17	<QL	C	1/5 YR
7782-49-2	Selenium, total recoverable	200.8	7.8	<QL	C	1/5 YR
7440-22-4	Silver, dissolved	200.8	0.96	<QL	C	1/5 YR
7440-28-0	Thallium, dissolved	200.7	40	<QL	C	1/5 YR
7440-66-6	Zinc, dissolved	200.7	54	38	C	1/5 YR
<b>PESTICIDES/PCB'S</b>						
309-00-2	Aldrin	608	0.05	<0.05	G	1/5 YR
57-74-9	Chlordane	608	0.2	ND	G	1/5 YR
2921-88-2	Chlorpyrifos (synonym = Dursban)	622	0.1	<0.1	G	1/5 YR
72-54-8	DDD (9-10-2009)	608	0.1	<QL	G	1/5 YR
72-55-9	DDE	608	0.1	<QL	G	1/5 YR
50-29-3	DDT	608	0.1	<QL	G	1/5 YR
8065-48-3	Demeton	622	0.1	<0.1	G	1/5 YR
60-57-1	Diazinon	622	0.1	<0.1	G	1/5 YR
60-57-1	Dieldrin (9-10-2009)	608	0.1	<QL	G	1/5 YR
959-98-8	Alpha-Endosulfan	608	0.1	<QL	G	1/5 YR
33213-65-9	Beta-Endosulfan	608	0.1	<QL	G	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL <sup>(1)</sup>	REPORTING RESULTS	SAMPLE TYPE <sup>(2)</sup>	SAMPLE FREQUENCY
1031-07-8	Endosulfan Sulfate	608	0.1	<QL	G	1/5 YR
72-20-8	Endrin	608	0.1	<QL	G	1/5 YR
7421-93-4	Endrin Aldehyde	608	0.05	<0.05	G	1/5 YR
86-50-0	Guthion	622	0.1	<0.1	G	1/5 YR
76-44-8	Heptachlor	608	0.05	<0.05	G	1/5 YR
1024-57-3	Heptachlor Epoxide	608	0.05	<0.05	G	1/5 YR
319-84-6	Hexachlorocyclohexane Alpha-BHC	608	0.05	<0.05	G	1/5 YR
319-85-7	Hexachlorocyclohexane Beta-BHC	608	0.05	<0.05	G	1/5 YR
58-89-9	Hexachlorocyclohexane Gamma-BHC or Lindane	608	0.05	<0.05	G	1/5 YR
143-50-0	Kepone	608	0.80	<0.80	G	1/5 YR
121-75-5	Malathion	622	0.10	<0.10	G	1/5 YR
72-43-5	Methoxychlor	608	0.05	<0.05	G	1/5 YR
2385-85-5	Mirex	608	0.05	<0.05	G	1/5 YR
56-38-2	Parathion	622	0.10	<0.10	G	1/5 YR
1336-36-3	PCB Total	608	7.0	ND	G	1/5 YR
8001-35-2	Toxaphene	608	5.0	ND	G	1/5 YR
<b>BASE NEUTRAL EXTRACTABLES</b>						
83-32-9	Acenaphthene	625	10.0	<10.0	G	1/5 YR
120-12-7	Anthracene	625	10.0	<10.0	G	1/5 YR
92-87-5	Benzidine	625	10.0	<10.0	G	1/5 YR
56-55-3	Benzo (a) anthracene	625	10.0	<10.0	G	1/5 YR
205-99-2	Benzo (b) fluoranthene	625	10.0	<10.0	G	1/5 YR
207-08-9	Benzo (k) fluoranthene	625	10.0	<10.0	G	1/5 YR
50-32-8	Benzo (a) pyrene	625	10.0	<10.0	G	1/5 YR
111-44-4	Bis 2-Chloroethyl Ether	625	10.0	<10.0	G	1/5 YR
39638-32-9	Bis 2-Chloroisopropyl Ether	625	10.0	<10.0	G	1/5 YR
85-68-7	Butyl benzyl phthalate	625	10.0	<10.0	G	1/5 YR
91-58-7	2-Chloronaphthalene	625	10.0	<10.0	G	1/5 YR
218-01-9	Chrysene	625	10.0	<10.0	G	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL <sup>(1)</sup>	REPORTING RESULTS	SAMPLE TYPE <sup>(2)</sup>	SAMPLE FREQUENCY
53-70-3	Dibenz(a,h)anthracene	625	20.0	<QL	G	1/5 YR
84-74-2	Dibutyl phthalate (synonym = Di-n-Butyl Phthalate)	625	10.0	<10.0	G	1/5 YR
95-50-1	1,2-Dichlorobenzene	624	10.0	<10.0	G	1/5 YR
541-73-1	1,3-Dichlorobenzene	624	10.0	<10.0	G	1/5 YR
106-46-7	1,4-Dichlorobenzene	624	10.0	<10.0	G	1/5 YR
91-94-1	3,3-Dichlorobenzidine	625	10.0	<10.0	G	1/5 YR
84-66-2	Diethyl phthalate	625	10.0	<10.0	G	1/5 YR
117-81-7	Di-2-Ethylhexyl Phthalate	625	10.0	<10.0	G	1/5 YR
131-11-3	Dimethyl phthalate	625	10.0	<10.0	G	1/5 YR
121-14-2	2,4-Dinitrotoluene	625	10.0	<10.0	G	1/5 YR
122-66-7	1,2-Diphenylhydrazine	625	10.0	<10.0	G	1/5 YR
206-44-0	Fluoranthene	625	10.0	<10.0	G	1/5 YR
86-73-7	Fluorene	625	10.0	<10.0	G	1/5 YR
118-74-1	Hexachlorobenzene	625	10.0	<10.0	G	1/5 YR
87-68-3	Hexachlorobutadiene	625	10.0	<10.0	G	1/5 YR
77-47-4	Hexachlorocyclopentadiene	625	10.0	<10.0	G	1/5 YR
67-72-1	Hexachloroethane	625	10.0	<10.0	G	1/5 YR
193-39-5	Indeno(1,2,3-cd)pyrene	625	20.0	<QL	G	1/5 YR
78-59-1	Isophorone	625	10.0	<10.0	G	1/5 YR
98-95-3	Nitrobenzene	625	10.0	<10.0	G	1/5 YR
62-75-9	N-Nitrosodimethylamine	625	10.0	<10.0	G	1/5 YR
621-64-7	N-Nitrosodi-n-propylamine	625	10.0	<10.0	G	1/5 YR
86-30-6	N-Nitrosodiphenylamine	625	10.0	<10.0	G	1/5 YR
129-00-0	Pyrene	625	10.0	<10.0	G	1/5 YR
120-82-1	1,2,4-Trichlorobenzene	625	10.0	<10.0	G	1/5 YR
<b>VOLATILES</b>						
107-02-8	Acrolein	624	10.0	<10.0	G	1/5 YR
107-13-1	Acrylonitrile	624	10.0	<10.0	G	1/5 YR
71-43-2	Benzene	624	10.0	<10.0	G	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL <sup>(1)</sup>	REPORTING RESULTS	SAMPLE TYPE <sup>(2)</sup>	SAMPLE FREQUENCY
75-25-2	Bromoform	624	10.0	<10.0	G	1/5 YR
56-23-5	Carbon Tetrachloride	624	10.0	<10.0	G	1/5 YR
108-90-7	Chlorobenzene (synonym = monochlorobenzene)	624	50.0	<QL	G	1/5 YR
124-48-1	Chlorodibromomethane	624	10.0	<10.0	G	1/5 YR
67-66-3	Chloroform	624	10.0	16.8	G	1/5 YR
75-09-2	Dichloromethane (synonym = methylene chloride)	624	20.0	<QL	G	1/5 YR
75-27-4	Dichlorobromomethane	624	10.0	<10.0	G	1/5 YR
107-06-2	1,2-Dichloroethane	624	10.0	<10.0	G	1/5 YR
75-35-4	1,1-Dichloroethylene	624	10.0	<10.0	G	1/5 YR
156-60-5	1,2-trans-dichloroethylene	624	10.0	<10.0	G	1/5 YR
78-87-5	1,2-Dichloropropane	624	10.0	<10.0	G	1/5 YR
542-75-6	1,3-Dichloropropene	624	20.0	<20.0	G	1/5 YR
100-41-4	Ethylbenzene	624	10.0	<10.0	G	1/5 YR
74-83-9	Methyl Bromide	624	10.0	<10.0	G	1/5 YR
79-34-5	1,1,2,2-Tetrachloroethane	624	10.0	<10.0	G	1/5 YR
127-18-4	Tetrachloroethylene	624	10.0	<10.0	G	1/5 YR
10-88-3	Toluene	624	10.0	<10.0	G	1/5 YR
79-00-5	1,1,2-Trichloroethane	624	10.0	<10.0	G	1/5 YR
79-01-6	Trichloroethylene	624	10.0	<10.0	G	1/5 YR
75-01-4	Vinyl Chloride	624	10.0	<10.0	G	1/5 YR
<b>RADIONUCLIDES</b>						
	Strontium 90 (pCi/L)	905.0	(5)	ND	C	1/5 YR
	Tritium (pCi/L)	906.0	(5)	ND	C	1/5 YR
	Beta Particle & Photon Activity (mrem/yr)	900.0 & 901.1	(5)	9.44 pCi/L	C	1/5 YR
	Gross Alpha Particle Activity (pCi/L)	900.0	(5)	ND	C	1/5 YR
<b>ACID EXTRACTABLES<sup>(6)</sup></b>						
95-57-8	2-Chlorophenol	625	10.0	<10.0	G	1/5 YR
120-83-2	2,4 Dichlorophenol	625	10.0	<10.0	G	1/5 YR
105-67-9	2,4 Dimethylphenol	625	10.0	<10.0	G	1/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL <sup>(1)</sup>	REPORTING RESULTS	SAMPLE TYPE <sup>(2)</sup>	SAMPLE FREQUENCY
51-28-5	2,4-Dinitrophenol	625	20.0	<20.0	G	1/5 YR
534-52-1	2-Methyl-4,6-Dinitrophenol	625	20.0	<20.0	G	1/5 YR
25154-52-3	Nonylphenol (9-10-2009)	625	10.0	<10.0	G	1/5 YR
87-86-5	Pentachlorophenol	625	50.0	<QL	G	1/5 YR
108-95-2	Phenol	625	10.0	<10.0	G	1/5 YR
88-06-2	2,4,6-Trichlorophenol	625	10.0	<10.0	G	1/5 YR
<b>MISCELLANEOUS</b>						
776-41-7	Ammonia as NH <sub>3</sub> -N	350.1	200	<200	C	1/5 YR
16887-00-6	Chlorides	SM 4500 Cl <sup>-</sup> B	1.0	60	C	1/5 YR
7782-50-5	Chlorine, Total Residual (3/19/2008)	HACH 8167	100	<100	G	1/5 YR
57-12-5	Cyanide, Free	ASTM D4282-02	10.0	<10.0	G	1/5 YR
N/A	<i>E. coli</i> / <i>Enterococcus</i> (#/100 mL) (3/16/2011)	Colilert-18	1	1	G	1/5 YR
7783-06-4	Hydrogen Sulfide	ASTM 4658-03	0.3 mg/l	<0.3 mg/l	C	1/5 YR
60-10-5	Tributyltin <sup>(7)</sup>	NBSR 85-3295	30 ng/l	ND	?	1/5 YR
471-34-1	Hardness(mg/l as CaCO <sub>3</sub> )	SM 2340 B	0.1	56.9	C	1/5 YR

\_\_\_\_\_  
Name of Principal Exec. Officer or Authorized Agent/Title

\_\_\_\_\_  
Signature of Principal Officer or Authorized Agent/Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. Sec. 1001 and 33 U.S.C. Sec. 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)

**FOOTNOTES:**

- (1) Quantification level (QL) is defined as the lowest concentration used for the calibration of a measurement system when the calibration is in accordance with the procedures published for the required method.

The quantification levels indicated for the metals are actually Specific Target Values developed for this permit. The Specific Target Value is the approximate value that may initiate a wasteload allocation analysis. Target values are not wasteload allocations or effluent limitations. The Specific Target Values are subject to change based on additional information such as hardness data, receiving stream flow, and design flows.

Units for the quantification level are micrograms/liter unless otherwise specified.



Quality control and quality assurance information shall be submitted to document that the required quantification level has been attained.

(2) Sample Type

G = Grab = An individual sample collected in less than 15 minutes. Substances specified with "grab" sample type shall only be collected as grabs. The permittee may analyze multiple grabs and report the average results provided that the individual grab results are also reported. For grab metals samples, the individual samples shall be filtered and preserved immediately upon collection.

C = Composite = A 24-hour (PW - Revise as required to require same composite duration as BOD<sub>5</sub>) composite unless otherwise specified. The composite shall be a combination of individual samples, taken proportional to flow, obtained at hourly or smaller time intervals. The individual samples may be of equal volume for flows that do not vary by +/- 10 percent over a 24-hour period.

SC = Special Composite = samples for base/neutral/acid compounds, PCBs, and pesticides must be collected as 4 individual grab samples taken proportional to flow at 6-hour intervals over the course of one day. The individual samples may be of equal volume for flows that do not vary by +/- 10 percent over a 24-hour period. Grab samples must be analyzed separately and the concentrations averaged. Alternately, grab samples may be collected in the field and composited in the laboratory if the compositing procedure produces results equivalent to results produced by arithmetic averaging of the results of analysis of individual grab samples.

- (3) A specific analytical method is not specified; however a target value for each metal has been established. An appropriate method to meet the target value shall be selected from the following list of EPA methods (or any approved method presented in 40 CFR Part 136). If the test result is less than the method QL, a "<[QL]" shall be reported where the actual analytical test QL is substituted for [QL].

<u>Metal</u>	<u>Analytical Method</u>
Antimony	1638; 1639
Arsenic	206.5; 1632
Chromium <sup>(9)</sup>	1639
Cadmium	1637; 1638; 1639; 1640
Chromium VI	218.6; 1639
Copper	1638; 1640
Lead	1637; 1638; 1640
Mercury	245.7; 1631
Nickel	1638; 1639; 1640
Selenium	1638; 1639
Silver	1638
Zinc	1638; 1639

- (4) Any approved method presented in 40 CFR Part 136.
- (5) The QL is at the discretion of the permittee. For any substances addressed in 40 CFR Part 136, the permittee shall use one of the approved methods in 40 CFR Part 136.
- (6) Testing for phenol requires continuous extraction.
- (7) Analytical Methods: NBSR 85-3295 or DEQ's approved analysis for Tributyltin may also be used [See A Manual for the Analysis of Butyltins in Environmental Systems by the Virginia Institute of Marine Science, dated November 1996].
- (8) Both Chromium III and Chromium VI may be measured by the total chromium analysis. If the result of the total chromium analysis is less than or equal to the lesser of the Chromium III or Chromium VI method QL, the results for both Chromium III and Chromium VI can be reported as "<[QL]", where the actual analytical test QL is substituted for [QL].
- (9) The lab may use SW846 Method 8270D provided the lab has an Initial Demonstration of Capability, has passed a PT for Kepone, and meets the acceptance criteria for Kepone as given in Method 8270D

**SECTION A. GENERAL INFORMATION***All applicants must complete this section.***1. Facility Information.**

- a. Facility name: SOUTH CENTRAL WASTEWATER AUTHORITY
- b. Contact person: L. ALAN HARRISON, P.E.  
Title: ASSISTANT EXECUTIVE DIRECTOR  
Phone: ( 804 ) 861-0111
- c. Mailing address:  
Street or P.O. Box: 900 MAGAZINE RD  
City or Town: PETERSBURG State: VA Zip: 23803
- d. Facility location:  
Street or Route #: 900 MAGAZINE RD  
County: \_\_\_\_\_  
City or Town: PETERSBURG State: VA Zip: 23803
- e. Is this facility a Class I sludge management facility? ☒ Yes ☐ No
- f. Facility design flow rate: 23 mgd
- g. Total population served: ~71,312
- h. Indicate the type of facility:  
☒ Publicly owned treatment works (POTW)  
☐ Privately owned treatment works  
☐ Federally owned treatment works  
☐ Blending or treatment operation  
☐ Surface disposal site  
☐ Other (describe): \_\_\_\_\_

**2. Applicant Information.** If the applicant is different from the above, provide the following:

- a. Applicant name: \_\_\_\_\_
- b. Mailing address:  
Street or P.O. Box: \_\_\_\_\_  
City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_
- c. Contact person: \_\_\_\_\_  
Title: \_\_\_\_\_  
Phone: ( \_\_\_\_\_ ) \_\_\_\_\_
- d. Is the applicant the owner or operator (or both) of this facility?  
☐ owner ☐ operator
- e. Should correspondence regarding this permit be directed to the facility or the applicant?  
☐ facility ☐ applicant

**3. Permit Information.**

- a. Facility's VPDES permit number (if applicable): VA0025437
- b. List on this form or an attachment, all other federal, state or local permits or construction approvals received or applied for that regulate this facility's sewage sludge management practices:

Permit Number:	Type of Permit:
_____	_____
_____	_____

FACILITY NAME: SOUTH CENTRAL WASTEWATER AUTHORITYVPDES PERMIT NUMBER: VA0025437

4. **Indian Country.** Does any generation, treatment, storage, application to land or disposal of sewage sludge from this facility occur in Indian Country?        Yes   X   No If "Yes", describe:

5. **Topographic Map.** Provide a topographic map or maps (or other appropriate maps if a topographic map is unavailable) that shows the following information. Maps should include the area one mile beyond all property boundaries of the facility:

- Location of all sewage sludge management facilities, including locations where sewage sludge is generated, stored, treated, or disposed.
- Location of all wells, springs, and other surface water bodies listed in public records or otherwise known to the applicant within 1/4 mile of the property boundaries.

6. **Line Drawing.** Provide a line drawing and/or a narrative description that identifies all sewage sludge processes that will be employed during the term of the permit including all processes used for collecting, dewatering, storing, or treating sewage sludge, the destination(s) of all liquids and solids leaving each unit, and all methods used for pathogen reduction and vector attraction reduction.

7. **Contractor Information.** Are any operational or maintenance aspects of this facility related to sewage sludge generation, treatment, use or disposal the responsibility of a contractor?   X   Yes        No

If "Yes", provide the following for each contractor (attach additional pages if necessary).

Name: RECYC SYSTEMS, INC

Mailing address:

Street or P.O. Box: P.O. BOX 562

City or Town: REMINGTON State: VA Zip: 22734

Phone: ( 540 ) 547-3300

Contractor's Federal, State or Local Permit Number(s) applicable to this facility's sewage sludge:

If the contractor is responsible for the use and/or disposal of the sewage sludge, provide a description of the service to be provided to the applicant and the respective obligations of the applicant and the contractor(s).

8. **Pollutant Concentrations.** Using the table below or a separate attachment, provide sewage sludge monitoring data for the pollutants which limits in sewage sludge have been established in 9 VAC 25-31-10 et seq. for this facility's expected use or disposal practices. All data must be based on three or more samples taken at least one month apart and must be no more than four and one-half years old.

POLLUTANT	CONCENTRATION (mg/kg dry weight)	SAMPLE DATE	ANALYTICAL METHOD	DETECTION LEVEL FOR ANALYSIS
Arsenic	<1.59	*	SW6010C	1.27 (1)
Cadmium	<1.52	*	SW6010C	1.27 (2)
Chromium	13.05	*	SW6010C	1.27 (3)
Copper	167	*	SW6010C	1.27 (4)
Lead	20.4	*	SW6010C	1.27 (5)
Mercury	0.456	*	SW7471A	0.020 (6)
Molybdenum	<4.48	*	SW6010C	1.27 (7)
Nickel	7.91	*	SW6010C	1.27 (8)
Selenium	<7.30	*	SW6010C	6.34 (9)
Zinc	278	*	SW6010C	1.27 (10)

\*All samples taken on odd months during 2010

FACILITY NAME: SOUTH CENTRAL WASTEWATER AUTHORITY

VPDES PERMIT NUMBER: VA0025437

- ☐ Option 2 (Anaerobic process, with bench-scale demonstration)
- ☐ Option 3 (Aerobic process, with bench-scale demonstration)
- ☐ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)
- ☐ Option 5 (Aerobic processes plus raised temperature)
- ☐ Option 6 (Raise pH to 12 and retain at 11.5)
- ☐ Option 7 (75 percent solids with no unstabilized solids)
- ☐ Option 8 (90 percent solids with unstabilized solids)
- ☐ None unknown

Describe, on this form or another sheet of paper, any treatment processes used at the receiving facility to reduce vector attraction properties of sewage sludge: \_\_\_\_\_

- h. Does the receiving facility provide any additional treatment or blending not identified in f or g above?  
☐ Yes ☐ No

If "Yes", describe, on this form or another sheet of paper, the treatment processes not identified in f or g above: \_\_\_\_\_

- i. If you answered "Yes" to f, g or h above, attach a copy of any information you provide to the receiving facility to comply with the "notice and necessary information" requirement of 9 VAC 25-31-530.G.
- j. Does the receiving facility place sewage sludge from your facility in a bag or other container for sale or give-away for application to the land? ☐ Yes ☐ No

If "Yes", provide a copy of all labels or notices that accompany the product being sold or given away.

- k. Will the sewage sludge be transported to the receiving facility in a truck-mounted watertight tank normally used for such purposes? ☐ Yes ☐ No. If "No", provide description and specification on the vehicle used to transport the sewage sludge to the receiving facility.

Show the haul route(s) on a location map or briefly describe the haul route below and indicate the days of the week and the times of the day sewage sludge will be transported.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

#### 7. Land Application of Bulk Sewage Sludge.

*(Complete Question 7.a if sewage sludge from your facility is applied to the land, unless the sewage sludge is covered in Questions 4, 5 or 6. Complete Question 7.b, c & d only if you are responsible for land application of sewage sludge.)*

- a. Total dry metric tons per 365-day period of sewage sludge applied to all land application sites:

3346 dry metric tons

- b. Do you identify all land application sites in Section C of this application? ☐ Yes ☐ No

If "No", submit a copy of the Land Application Plan (LAP) with this application (LAP should be prepared in accordance with the instructions).

- c. Are any land application sites located in States other than Virginia? ☐ Yes ☐ No

If "Yes", describe, on this form or on another sheet of paper, how you notify the permitting authority for the States where the land application sites are located. Provide a copy of the notification.

- d. Attach a copy of any information you provide to the owner or lease holder of the land application sites to comply with the "notice and necessary" information requirement of 9 VAC 25-31-530 F and/or H (Examples may be obtained in Appendix IV).

**8. Surface Disposal.**

*(Complete Question 8 if sewage sludge from your facility is placed on a surface disposal site.)*

- a. Total dry metric tons per 365-day period of sewage sludge from your facility placed on all surface disposal sites: \_\_\_\_\_ dry metric tons

- b. Do you own or operate all surface disposal sites to which you send sewage sludge for disposal?  
\_\_\_\_\_ Yes \_\_\_\_\_ No

If "No", answer questions c - g for each surface disposal site that you do not own or operate. If you send sewage sludge to more than one surface disposal site, attach additional pages as necessary.

- c. Site name or number: \_\_\_\_\_

- d. Contact person: \_\_\_\_\_

Title: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

Contact is: \_\_\_\_\_ Site Owner \_\_\_\_\_ Site operator

- e. Mailing address:

Street or P.O. Box: \_\_\_\_\_

City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

- f. Total dry metric tons per 365-day period of sewage sludge from your facility placed on this surface disposal site: \_\_\_\_\_ dry metric tons

- g. List, on this form or an attachment, the surface disposal site VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the sewage sludge use or disposal practices at the surface disposal site:

Permit Number: \_\_\_\_\_ Type of Permit: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**9. Incineration.** Sludge sent to Hopewell incinerator only if our pad is full - has not occurred yet

*(Complete Question 9 if sewage sludge from your facility is fired in a sewage sludge incinerator.)*

- a. Total dry metric tons per 365-day period of sewage sludge from your facility fired in a sewage sludge incinerator: 0 \_\_\_\_\_ dry metric tons

- b. Do you own or operate all sewage sludge incinerators in which sewage sludge from your facility is fired?  
\_\_\_\_\_ Yes X \_\_\_\_\_ No

If "No", answer questions c - g for each sewage sludge incinerator that you do not own or operate. If you send sewage sludge to more than one sewage sludge incinerator, attach additional pages as necessary.

- c. Incinerator name or number: Hopewell Regional Wastewater Treatment Facility

- d. Contact person: Mark Haley

Title: Director

Phone: ( 804 ) 541-2210

Contact is: X Incinerator Owner X Incinerator Operator

- e. Mailing address:

Street or P.O. Box: P.O. Box 969

City or Town: Hopewell State: VA Zip: 23860

- f. Total dry metric tons per 365-day period of sewage sludge from your facility fired in this sewage sludge incinerator: 0 \_\_\_\_\_ dry metric tons

- g. List on this form or an attachment the numbers of all other federal, state or local permits that regulate the firing

FACILITY NAME: SOUTH CENTRAL WASTEWATER AUTHORITY

VPDES PERMIT NUMBER: VA0025437

of sewage sludge at this incinerator:

Permit Number:

VA0066630

PRO50735

Type of Permit:

VPDES Permit (Sludge Management Plan)

Federal Operating Permit (Air)

**10. Disposal in a Municipal Solid Waste Landfill.**

*(Complete Question 10 if sewage sludge from your facility is placed on a municipal solid waste landfill. Provide the following information for each municipal solid waste landfill on which sewage sludge from your facility is placed. If sewage sludge is placed on more than one municipal solid waste landfill, attach additional pages as necessary.)*

- a. Landfill name: \_\_\_\_\_
- b. Contact person: \_\_\_\_\_  
Title: \_\_\_\_\_  
Phone: ( \_\_\_\_\_ ) \_\_\_\_\_  
Contact is: \_\_\_\_\_ Landfill Owner \_\_\_\_\_ Landfill Operator
- c. Mailing address:  
Street or P.O. Box: \_\_\_\_\_  
City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_
- d. Landfill location.  
Street or Route #: \_\_\_\_\_  
County: \_\_\_\_\_  
City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_
- e. Total dry metric tons per 365-day period of sewage sludge placed in this municipal solid waste landfill:  
\_\_\_\_\_ dry metric tons
- f. List, on this form or an attachment, the numbers of all federal, state or local permits that regulate the operation of this municipal solid waste landfill:  
Permit Number: \_\_\_\_\_ Type of Permit: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- g. Does sewage sludge meet applicable requirements in the Virginia Solid Waste Management Regulation, 9 VAC 20-80-10 et seq., concerning the quality of materials disposed in a municipal solid waste landfill?  
\_\_\_\_\_ Yes \_\_\_\_\_ No
- h. Does the municipal solid waste landfill comply with all applicable criteria set forth in the Virginia Solid Waste Management Regulation, 9 VAC 20-80-10 et seq.? \_\_\_\_\_ Yes \_\_\_\_\_ No
- i. Will the vehicle bed or other container used to transport sewage sludge to the municipal solid waste landfill be watertight and covered? \_\_\_\_\_ Yes \_\_\_\_\_ No  
Show the haul route(s) on a location map or briefly describe the route below and indicate the days of the week and time of the day sewage sludge will be transported.  
\_\_\_\_\_  
\_\_\_\_\_

**SECTION C. LAND APPLICATION OF BULK SEWAGE SLUDGE**

Complete this section for sewage sludge that is land applied unless any of the following conditions apply:

- The sewage sludge meets the Table 1 ceiling concentrations, the Table 3 pollutant concentrations, Class A pathogen requirements and one of the vector attraction reduction options 1-8 (fill out B.4 instead) (EQ Sludge); or
- The sewage sludge is sold or given away in a bag or other container for application to the land (fill out B.5 instead); or
- You provide the sewage sludge to another facility for treatment or blending (fill out B.6 instead).

Complete Section C for every site on which the sewage sludge that you reported in B.7 is land applied.

**1. Identification of Land Application Site.**

- a. Site name or number: Section C is not applicable as SCWWA is not responsible for land application of sludge generated at our facility.
- b. Site location (Complete one of the following):
- i. Street or Route#: \_\_\_\_\_  
County: \_\_\_\_\_  
City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_
- ii. Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_  
Method of latitude/longitude determination  
\_\_\_\_ USGS map \_\_\_\_ Filed survey \_\_\_\_ Other
- c. Topographic map. Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location.

**2. Owner Information.**

- a. Are you the owner of this land application site? \_\_\_\_ Yes \_\_\_\_ No
- b. If "No", provide the following information about the owner:  
Name: \_\_\_\_\_  
Street or P.O. Box: \_\_\_\_\_  
City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

**3. Applier Information:**

- a. Are you the person who applies, or who is responsible for application of, sewage sludge to this land application site?  
\_\_\_\_ Yes \_\_\_\_ No
- b. If "No", provide the following information for the person who applies the sewage sludge:  
Name: \_\_\_\_\_  
Street or P.O. Box: \_\_\_\_\_  
City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: ( \_\_\_\_\_ ) \_\_\_\_\_
- c. List, on this form or an attachment, the numbers of all federal, state or local permits that regulate the person who applies sewage sludge to this land application site:  
Permit Number: \_\_\_\_\_ Type of Permit: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**4. Site Type.** Identify the type of land application site from among the following:

\_\_\_\_ Agricultural land      \_\_\_\_ Reclamation site      \_\_\_\_ Forest  
\_\_\_\_ Public contact site      \_\_\_\_ Other (describe \_\_\_\_\_)

**5. Vector Attraction Reduction.**

Are any vector attraction reduction requirements met when sewage sludge is applied to the land application site?

FACILITY NAME: SOUTH CENTRAL WASTEWATER AUTHORITY

VPDES PERMIT NUMBER: VA0025437

\_\_\_\_ Yes \_\_\_\_ No If "Yes", answer a and b.

a. Indicate which vector attraction reduction option is met:

\_\_\_\_ Option 9 (Injection below land surface)

\_\_\_\_ Option 10 (Incorporation into soil within 6 hours)

b. Describe, on this form or on another sheet of paper, any treatment processes used at the land application site to reduce the vector attraction properties of sewage sludge:

\_\_\_\_\_  
\_\_\_\_\_

**6. Cumulative Loadings and Remaining Allotments.**

*(Complete Question 6 only if the sewage sludge applied to this site since July 20, 1993 is subject to the cumulative pollutant loading rates (CPLRs) - see instructions.)*

a. Have you contacted DEQ or the permitting authority in the state where the sewage sludge subject to the CPLRs will be applied to ascertain whether bulk sewage sludge subject to the CPLRs has been applied to this site since July 20, 1993? \_\_\_\_ Yes \_\_\_\_ No

If "No", sewage sludge subject to the CPLRs may not be applied to this site.

If "Yes", provide the following information:

Permitting authority: \_\_\_\_\_

Contact person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

b. Based upon this inquiry, has bulk sewage sludge subject to the CPLRs been applied to this site since July 20, 1993? \_\_\_\_ Yes \_\_\_\_ No If "No", skip the rest of Question 6. If "Yes", answer questions c - e.

c. Site size, in hectares: \_\_\_\_\_ (one hectare = 2.471 acres)

d. Provide the following information for every facility other than yours that is sending or has sent sewage sludge subject to the CPLRs to this site since July 20, 1993. If more than one such facility sends sewage sludge to this site, attach additional pages as necessary.

Facility name: \_\_\_\_\_

Facility contact: \_\_\_\_\_

Title: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

Mailing address.

Street or P.O. Box: \_\_\_\_\_

City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

e. Provide the total loading and allotment remaining, in kg/hectare, for each of the following pollutants:

	Cumulative loading	Allotment remaining
Arsenic	_____	_____
Cadmium	_____	_____
Copper	_____	_____
Lead	_____	_____
Mercury	_____	_____
Nickel	_____	_____
Selenium	_____	_____
Zinc	_____	_____

*Complete Questions 7-12 below only if you apply sewage sludge, or you are responsible for land application of sewage sludge. Information required by these questions may be prepared as attachments to this form. Skip the following questions if you contract land application to someone else (as indicated under Section A.7) who is responsible for the operation.*



**7. Sludge Characterization.** Use the table below or a separate attachment, provide at least one analysis for each parameter.

PCBs (mg/kg)	_____
pH (S. U.)	_____
Percent Solids (%)	_____
Ammonium Nitrogen (mg/kg)	_____
Nitrate Nitrogen (mg/kg)	_____
Total Kjeldahl Nitrogen (mg/kg)	_____
Total Phosphorus (mg/kg)	_____
Total Potassium (mg/kg)	_____
Alkalinity as CaCO <sub>3</sub> * (mg/kg)	_____

\* Lime treated sludge (10% or more lime by dry weight) should be analyzed for percent CaCO<sub>3</sub>.

**8. Storage Requirements.**

Existing and proposed sludge storage facilities must provide an estimated annual sludge balance on a monthly basis incorporating such factors as storage capacity, sludge production and land application schedule. Include pertinent calculations justifying storage requirements.

Proposed sludge storage facilities must also provide the following information:

- a. A sludge storage site layout on a 7.5 minute topographic quadrangle or other appropriate scaled map to show the following topographic features of the surrounding landscape to a distance of 0.25 mile. Clearly mark the property line.
  - 1) Water wells, abandoned or operating
  - 2) Surface waters
  - 3) Springs
  - 4) Public water supply(s)
  - 5) Sinkholes
  - 6) Underground and/or surface mines
  - 7) Mine pool (or other) surface water discharge points
  - 8) Mining spoil piles and mine dumps
  - 9) Quarry(s)
  - 10) Sand and gravel pits
  - 11) Gas and oil wells
  - 12) Diversion ditch(s)
  - 13) Agricultural drainage ditch(s)
  - 14) Occupied dwellings, including industrial and commercial establishments
  - 15) Landfills or dumps
  - 16) Other unlined impoundments
  - 17) Septic tanks and drainfields
  - 18) Injection wells
  - 19) Rock outcrops
- b. A topographic map of sufficient detail to clearly show the following information:
  - 1) Maximum and minimum percent slopes
  - 2) Depressions on the site that may collect water
  - 3) Drainageways that may attribute to rainfall run-on to or runoff from this site
  - 4) Portions of the site (if any) which are located with the 100-year floodplain and how the storage facility will be protected from flooding
- c. Data and specifications for the storage facility lining material.
- d. Plan and cross-sectional views of the storage facility.
- e. Depth from the bottom of the storage facility to the seasonal high water table and separation distance to the permanent water table.

**9. Land Area Requirements.** Provide calculations justifying the land area requirements for land application of sewage

FACILITY NAME: \_\_\_\_\_

VPDES PERMIT NUMBER: \_\_\_\_\_

sludge taking into consideration average soil productivity group, crop(s) to be grown and most limiting factor(s) of the sewage sludge, specifically Plant Available Nitrogen (PAN), Calcium Carbonate Equivalence (CCE), and metal loadings (CPLR sewage sludge only), where applicable. Relate PAN, CCE, and metal loadings to demonstrate the most limiting factor for land application.

- 10. Landowner Agreement Forms.** Provide a properly completed Sewage Sludge Application Agreement Form (attached) for each landowner if sewage sludge is to be applied onto land not owned by the applicant.

**11. Ground Water Monitoring.**

Are any ground water monitoring data available for this land application site? \_\_\_\_\_ Yes \_\_\_\_\_ No

If "Yes", submit the ground water monitoring data with this permit application. Also submit a written description of the well locations, approximate depth to ground water, and the ground water monitoring procedures used to obtain these data.

**12. Land Application Site Information.**

*(Complete Items a-d for sites receiving infrequent application - land application of sewage sludge up to the agronomic rate at a frequency of once in a 3 year period; complete Items a-h for sites receiving frequent application - land application of sewage sludge in excess of 70% the agronomic rate at a frequency greater than once in a 3 year period)*

- a. Provide a general location map for each county which clearly indicates the location of all the land application sites.
- b. For each land application site provide a site plan of sufficient detail to clearly show the concerned landscape features and associated buffer zones (See instructions). Provide a legend for each landscape feature and the net acreage for each field taking into account the proposed buffer zones.
- c. In order to ensure that land application of bulk sewage sludge will not impact federally listed threatened or endangered species or federally designated critical habitat, the applicant must notify the field office of the U. S. Department of the Interior, Fish and Wildlife Service (FWS), by a letter, the proposed land application activities with the identification of the land application sites. The address and phone number of FWS are provided below.

U.S. Fish and Wildlife Service  
Virginia Field Office  
P.O. Box 480  
White Marsh, VA 23183  
TEL: (804) 693-6694

Provide a copy of the notification letter with this application form.

- d. Provide a soil survey map, preferably photographically based, with the field boundaries clearly marked. (A USDA-SCS soil survey map should be provided, if available.)

Provide a detailed legend for each soil survey map which uses accepted USDA-SCS descriptions of the typifying pedon for each soil series (soil type). Complex associations may be described as a range of characteristics. Soil descriptions shall include as a minimum the following information.

- 1) Soil symbol
- 2) Soil series, textural phase and slope range
- 3) Depth to seasonal high water table
- 4) Depth to bedrock
- 5) Estimated soil productivity group (for the proposed crop rotation)

***Item e - h are required for sites receiving frequent application of sewage sludge***

- e. In order to verify the information provided in item d, characterize the soil at each land application site. Representative soil borings or test pits to a depth of five feet or to bedrock if shallower, are to be coordinated for the typifying pedon of each soil series (soil type). Soil descriptions shall include as a minimum the following information:
  - 1) Soil symbol
  - 2) Soil series, textural phase and slope range
  - 3) Depth to seasonal high water table
  - 4) Depth to bedrock
  - 5) Estimated soil productivity group (for the proposed crop rotation)
- f. Collect and analyze soil samples from each field, weighted to best represent each of the soil borings performed for Item e. Using the table below or a separate attachment, provide at least one analysis per sample for each of the

**FACILITY NAME:** SOUTH CENTRAL WASTEWATER AUTHORITY

**VPDES PERMIT NUMBER:** VA0025437

following parameters.

Soil Organic Matter (%)	_____
Soil pH (std. units)	_____
Cation Exchange Capacity (meq/100g)	_____
Total Nitrogen (ppm)	_____
Organic Nitrogen (ppm)	_____
Ammonia Nitrogen (ppm)	_____
Nitrate Nitrogen (ppm)	_____
Available Phosphorus (ppm)	_____
Exchangeable Potassium (mg/100g)	_____
Exchangeable Sodium (mg/100g)	_____
Exchangeable Calcium (mg/100g)	_____
Exchangeable Magnesium (mg/100g)	_____
Arsenic (ppm)	_____
Cadmium (ppm)	_____
Copper (ppm)	_____
Lead (ppm)	_____
Mercury (ppm)	_____
Molybdenum (ppm)	_____
Nickel (ppm)	_____
Selenium (ppm)	_____
Zinc (ppm)	_____
Manganese (ppm)	_____
Particle Size Analysis or USDA Textural Estimate (%)	_____

- g. Relate the crop nutrient needs to anticipated yields, soil productivity rating and the various fertilizer or nutrient sources from sludge and chemical fertilizers. Describe any specialized agronomic management practices which may be required as a result of high soil pH. If the sludge is expected to possess an unusually high CCE or other unusual properties, provide a description of any plant tissue testing, supplemental fertilization or intensive agronomic management practices which may be necessary.
- h. Using a narrative format and referencing any related charts, describe the proposed cropping system. Show how the crop rotation and management will be coordinated with the design of the land application system. Include any supplemental fertilization program, soil testing and the coordination of tillage practices, planting and harvesting schedules and timing of land application.

**SEWAGE SLUDGE APPLICATION AGREEMENT**

This sewage sludge application agreement is made on this date \_\_\_\_\_ between \_\_\_\_\_, referred to here as "landowner", and \_\_\_\_\_, referred to here as the "Permittee".

Landowner is the owner of agricultural land shown on the map attached as Exhibit A and designated there as \_\_\_\_\_ ("landowner's land"). Permittee agrees to apply and landowner agrees to comply with certain permit requirements following application of sewage sludge on landowner's land in amounts and in a manner authorized by VPDES permit number \_\_\_\_\_ which is held by the Permittee.

Landowner acknowledges that the appropriate application of sewage sludge will be beneficial in providing fertilizer and soil conditioning to the property. Moreover, landowner acknowledges having been expressly advised that, in order to protect public health, the following site restrictions must be adhered to when sewage sludge receives Class B treatment for pathogen reduction:

1. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge;
2. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for four months or longer prior to incorporation into the soil;
3. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than four months prior to incorporation into the soil;
4. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge;
5. Animals shall not be grazed on the land for 30 days after application of sewage sludge;
6. Turf grown on land where sewage sludge is applied shall not be harvested for one year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the State Water Control Board;
7. Public access to land with a high potential for public exposure shall be restricted for one year after application of sewage sludge;
8. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.
9. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of sewage sludge borne cadmium equal to or exceeding 0.5 kilograms/hectare (0.45 pounds/acre).

Permittee agrees to notify landowner or landowner's designee of the proposed schedule for sewage sludge application and specifically prior to any particular application to landowner's land. This agreement may be terminated by either party upon written notice to the address specified below.

Landowner:

Permittee:

\_\_\_\_\_  
Signature\_\_\_\_\_  
Signature\_\_\_\_\_  
Mailing Address\_\_\_\_\_  
Mailing Address

## SECTION D. SURFACE DISPOSAL

*Complete this section only if you own or operate a surface disposal site. Provide the information for each active sewage sludge unit.*

**1. Information on Active Sewage Sludge Units.**

- a. Unit name or number: \_\_\_\_\_
- b. Unit location
- i. Street or Route#: \_\_\_\_\_  
County: \_\_\_\_\_  
City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_
- ii. Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_  
Method of latitude/longitude determination  
\_\_\_\_ USGS map \_\_\_\_ Filed survey \_\_\_\_ Other
- c. Topographic map. Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location.
- d. Total dry metric tons of sewage sludge placed on the active sewage sludge unit per 365-day period:  
\_\_\_\_\_ dry metric tons.
- e. Total dry metric tons of sewage sludge placed on the active sewage sludge unit over the life of the unit:  
\_\_\_\_\_ dry metric tons.
- f. Does the active sewage sludge unit have a liner with a minimum hydraulic conductivity of  $1 \times 10^{-7}$  cm/sec?  
\_\_\_\_ Yes \_\_\_\_ No If "Yes", describe the liner or attach a description.  
\_\_\_\_\_  
\_\_\_\_\_
- g. Does the active sewage sludge unit have a leachate collection system? \_\_\_\_ Yes \_\_\_\_ No  
If "Yes", describe the leachate collection system or attach a description. Also, describe the method used for leachate disposal and provide the numbers of any federal, state or local permits for leachate disposal:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- h. If you answered "No" to either f or g, answer the following:  
Is the boundary of the active sewage sludge unit less than 150 meters from the property line of the surface disposal site? \_\_\_\_ Yes \_\_\_\_ No If "Yes", provide the actual distance in meters: \_\_\_\_\_
- i. Remaining capacity of active sewage sludge unit, in dry metric tons: \_\_\_\_\_ dry metric tons  
Anticipated closure date for active sewage sludge unit, if known: \_\_\_\_\_ (MM/DD/YYYY)  
Provide with this application a copy of any closure plan developed for this active sewage sludge unit.

**2. Sewage Sludge from Other Facilities.**

Is sewage sludge sent to this active sewage sludge unit from any facilities other than yours? \_\_\_\_ Yes \_\_\_\_ No  
If "Yes", provide the following information for each such facility, attach additional sheets as necessary.

- a. Facility name: \_\_\_\_\_
- b. Facility contact: \_\_\_\_\_  
Title: \_\_\_\_\_  
Phone: ( \_\_\_\_\_ ) \_\_\_\_\_
- c. Mailing address:  
Street or P.O. Box: \_\_\_\_\_  
City or Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

- d. List, on this form or an attachment, the facility's VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the facility's sewage sludge management practices:

Permit Number: \_\_\_\_\_

Type of Permit: \_\_\_\_\_

- e. Which class of pathogen reduction is achieved before sewage sludge leaves the other facility?

☐ Class A    ☐ Class B    ☐ Neither or unknown

- f. Describe, on this form or on another sheet of paper, any treatment processes used at the other facility to reduce pathogens in sewage sludge: \_\_\_\_\_

- g. Which vector attraction reduction option is achieved before sewage sludge leaves the other facility?

☐ Option 1 (Minimum 38 percent reduction in volatile solids)☐ Option 2 (Anaerobic process, with bench-scale demonstration)☐ Option 3 (Aerobic process, with bench-scale demonstration)☐ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)☐ Option 5 (Aerobic processes plus raised temperature)☐ Option 6 (Raise pH to 12 and retain at 11.5)☐ Option 7 (75 percent solids with no unstabilized solids)☐ Option 8 (90 percent solids with unstabilized solids)☐ None or unknown

- h. Describe, on this form or another sheet of paper, any treatment processes used at the other facility to reduce vector attraction properties of sewage sludge: \_\_\_\_\_

- i. Describe, on this form or another sheet of paper, any other sewage sludge treatment activities performed by the other facility that are not identified in e - h above: \_\_\_\_\_

### 3. Vector Attraction Reduction.

- a. Which vector attraction reduction option, if any, is met when sewage sludge is placed on this active sewage sludge unit?

☐ Option 9 (Injection below land surface)☐ Option 10 (Incorporation into soil within 6 hours)☐ Option 11 (Covering active sewage sludge unit daily)

- b. Describe, on this form or another sheet of paper, any treatment processes used at the active sewage sludge unit to reduce vector attraction properties of sewage sludge: \_\_\_\_\_

### 4. Ground Water Monitoring.

- a. Is ground water monitoring currently conducted at this active sewage sludge unit or are ground water monitoring data otherwise available for this active sewage sludge unit? ☐ Yes ☐ No

If "Yes", provide a copy of available ground water monitoring data. Also provide a written description of the well locations, the approximate depth to ground water, and the ground water monitoring procedures used to obtain these

**FACILITY NAME:** SOUTH CENTRAL WASTEWATER AUTHORITY

**VPDES PERMIT NUMBER:** VA0025437

data.

- b. Has a ground water monitoring program been prepared for this active sewage sludge unit?  
\_\_\_\_\_ Yes \_\_\_\_\_ No If "Yes", submit a copy of the ground water monitoring program with this application.
- c. Have you obtained a certification from a qualified ground water scientist that the aquifer below the active sewage sludge unit has not been contaminated? \_\_\_\_\_ Yes \_\_\_\_\_ No  
If "Yes", submit a copy of the certification with this application.

**5. Site-Specific Limits.**

Are you seeking site-specific pollutant limits for the sewage sludge placed on the active sewage sludge unit?  
\_\_\_\_\_ Yes \_\_\_\_\_ No If "Yes", submit information to support the request for site-specific pollutant limits with this application.